

REMARKS

Claims 19-27 remain pending in the instant application and claims 1-18 are withdrawn by the Examiner. Claims 19-27 presently stand rejected. Claim 19 is amended herein to cure a grammatical error. Entry of this amendment and reconsideration of the pending claims are respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chunming Qiao, Optical Networking Solutions for next-generation Internet networks. “Label Optical Burst Switching for IP-over-WDM Intergration”, IEEE Communication Magazine, September 2000, pg. 104-114 in view of Biggs et al. (US 2004/0236946 A1).

Claims 20-21 and 25-26 stand under 35 U.S.C. § 103(a) as being unpatentable over Qiao in view of Biggs and Townsend et al. (US 5,850,441).

Claims 22-23 and 27 stand under 35 U.S.C. § 103(a) as being unpatentable over Qiao in view of Biggs, Townsend, and Stringer et al. (US 2003/0196087 A1).

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Qiao in view of Biggs, Townsend, and McMillian et al. (US 2004/0039925 A1).

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03.

Independent claim 19 recites, in pertinent part,

generating a control burst, the control burst containing information to reserve network resources to form a virtual lightpath between the source edge node and the destination edge node during a scheduled timeslot, the virtual lightpath including at least one lightpath segment;

adding information to the **control burst indicating whether or not one or more data bursts** to be sent from the source edge node to the destination edge node **will be encrypted**;

Applicants respectfully submit that the combination of Qiao, Biggs, Townsend, Stringer, and McMillan either alone or in combination, fails to disclose, teach, or suggest using a control burst (which are used to reserve network resources to form virtual lightpaths) to indicate whether or not a data burst will be encrypted.

While Qiao discloses optical burst switching including the use of control packets and data bursts, Qiao does not teach or suggest using the control packets to indicate whether or not one or more data bursts will be encrypted. In other words, Qiao does not teach or suggest adding information into the control packets illustrated in FIG. 1 of Qiao to indicate whether associated data bursts are encrypted. In fact, Qiao makes no mention of encrypting the data bursts at all or any disclosure related to optical encryption.

The Office Action acknowledges “Qiao does not explicitly teach indicating whether or not one or more data bursts containing the data that are encrypted.” *Office Action* mailed 10/14/08, page 5. Consequently, the Office Action cites para. [0014] of Biggs as teaching this missing element. Biggs discloses operation of a wireless network that is capable of air interface encryption between a cellular client and a cellular tower or end-to-end encryption between the cellular clients themselves. Biggs states,

The present invention provides a first indicator to indicate whether end-to-end encryption is applied to at least a portion of the payload and a second indicator to indicate whether air interface encryption is applied to at least a portion of the payload in each over-the air burst (i.e., over-the-air fragment); thus, the first indicator and the second indicator are present at the same layer of the protocol stack (e.g., the link layer). The receiving device uses the indicators to efficiently determine any decryption mechanism, if any, required to recover/process the received information/payload. **It should be noted that the present invention uses the term "fragment" and/or "burst" to describe the smallest standalone entity of the air interface.** In a time division multiple access ("TDMA") system, this may also be called a slot. (Biggs, para. [0014]. Emphasis added)

FIGS. 2-5 illustrates examples of the structure of a burst 200 comprising the first indicator 202, the second indicator 204 and two fields of payload 206, 208 in accordance with the preferred embodiment of the present invention; FIG. 6 illustrates a flowchart of the operation of the receiving communication device 102 to determine the earliest point in time at which the receiving communication device 102 may process the received payload 206, 208. Some of the payload fields are capable of being protected with end-to-end encryption, while all of the fields are capable of being protected with air interface encryption. It should be noted that while FIGS. 2-5 illustrate two fields of payload 206, 208 in the burst 200, the burst 200 may containing any number of fields, including one, and still remain within the spirit and scope of the present invention. (Biggs, para. [0017]. Emphasis added)

These portions of Biggs disclose that both the first indication of whether end-to-end encryption is used and the second indication of whether air interface encryption is used are positioned within the link layer of their protocol stack and these indications are embedded with **each burst** carrying data payloads.

Referring to FIGs. 2-5, Biggs teaches that encryption indicators 202 and 204 are included within each burst (Biggs defines a “burst” as the smallest standalone entity of the air interface between a cell phone and a cell tower) carrying data payloads 206 and 208. Biggs does not teach or suggest placing encryption indicators 202 or 204 within a **separate control burst** (which control burst is used to reserve network resource) to indicate whether a **separate data burst** will be encrypted. In contrast, Biggs embeds indicators 202 and 204 within **every data burst** and does not teach or suggest placing the indicators in control bursts separate from the bursts carrying the data payloads. Therefore, Biggs does not teach or suggest encryption in an optical network and certainly does not teach or suggest using a control burst (which are used to reserve network resources to form virtual lightpaths) to indicate whether or not a data burst will be encrypted.

Townsend also fails to teach or suggest this very same element of claim 19. Rather, Townsend discloses the use of quantum cryptography for use with an optical ring network. However, Townsend fails to disclose use of control and data bursts, much less using control bursts to indicate whether or not a related data burst is encrypted.

Stringer and McMillan also fail to disclose, teach, or suggest this very same element.

Consequently, the cited prior art fails to teach or suggest all elements of claim 19, as required under M.P.E.P. § 2143.03. Accordingly, Applicants request that the instant §103(a) rejections of independent claim 19 be withdrawn.

The dependent claims are nonobvious over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 103 rejections of the dependent claims be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that the applicable rejections have been overcome and all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative at (206) 292-8600 if the Examiner believes that an interview might be useful for any reason.

CHARGE DEPOSIT ACCOUNT

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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